

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5-10-2010 has been entered.

2. Claims **1 – 6, 8 - 14** are pending. Claims **1, 9, 10, 14** have been amended.

Claims **7, 15, 16** have been cancelled. Claims **1, 9, 10, 14** are independent. File date is 10-17-2005.

- The 101 Rejection will be withdrawn due to arguments.

### *Response to Arguments*

3. Applicant's arguments have been fully considered but they are not persuasive.

#### Rejection of Claims 1-6 and 8-14 under 35 U.S.C. 103(a)

A. Applicant argues: *said receiving means receives a special warning messages from the server via the first network when the server has not received the normal state signals in due time, and the maintenance means triggers the sending of a normal state signal to the server via the second network as soon as the special warning message is received. (Remarks Page 8, Line 21 - Page 9, Line 2)*

Sarkar discloses the transmission of a warning message from a server when the server has not received a normal state signal during a period of time. Sarkar discloses the transmission of a response message or an indication of a normal state

to the server after receipt of the warning message. (Sarkar col 5, ll 49-62: plays a warning notification to endpoints of active media streams after timer expires, endpoint responds, "I'm active" (normal state); call resource resets timer and continues session; col 2, ll 59-62: transmits packets of voice, data, and other information (media), in band communications used for notification messages; col 4, ll 14-18: media streams)

Refer to Office Action.

B. Applicant argues: "*said receiving means receives a special warning message from said server via said first network when said receiver has not received said normal state signals in due time, and said maintenance means triggering a sending of a normal state signal to said server via said second network as soon as said at least one special warning message is received*" (Remarks Page 9, Lines 13-17)

Refer to Section A.

C. Applicant argues: "*said receiving means to receive special warning messages from said server via said first network when said server has not received said normal state signals in due time*" (Remarks Page 9, Line 23 - Page 10, Line 2)

Refer to Section A.

D. Applicant argues: *Dependent Claims 2-6, 8 (Remarks Page 13, Lines 1-2),*

Claims 11, 12 (Remarks Page 15, Lines 4-5) and *Dependent Claim 13 (Remarks Page 15, Lines 6-7)*

Responses to arguments against independent claims answer arguments against associated dependent claims.

E. Applicant argues: *Independent Claim 9 (Remarks Page 13, Lines 3-6), Claim 10 (Remarks Page 13, Line 7 - Page 15, Line 3) and Claim 14 (Remarks Page 15, Lines 8-11)*.

Independent claims 9 and 10 have similar distinctions as independent claim 1.

Responses to arguments for independent claim 1 also answer arguments against independent claim 9 and 10.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 - 6, 8 - 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al.** (US Patent No. 5,822,524) in view of **Forecast et al.** (US Patent No. 6,230,200) and further in view of **Sarkar et al.** (US Patent No. 6,917,587).

**Regarding Claim 1**, Chen discloses data requesting device through at least one first

communication network from at least one data server, comprising:

- a) sending means for sending requests of determined data to the server via at least one second communication network, (Chen col 5, II 59-67: send a command packet (specific request) for retrieval of requested data; col 5, II 39-44: control channel serves to exchange control messages; data channel serves to transmit multimedia data from the server to client; data channel (first) and control channel (second) communications channels (networks); specification (page 3) defines communications network as bi-directional communications network)
- b) receiving means for receiving streamed data from said server via said first communication network and for providing said data to processing means for them to be exploited, (Chen col 5, II 48-59: data receiver receives incoming data packets from the network; data receiver signals buffer manager to place data packets into the packet buffer; output processor delivers data to multimedia application) and
- c) control means for producing pause control signals, for pausing data streaming from said server, and for triggering the sending of said pause control signals to said server via said second network through said sending means, (Chen col 6, II 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, II 47-49: client agent sends NORMAL-TO-PAUSE command if amount increase above high water mark)

Chen discloses for generating normal state signals, for said server for indicating a normal operation at said data requesting device, to said server via said second

network; (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark)

Chen does not explicitly disclose triggering periodic transmission of said state signals.

However, Forecast discloses:

d) maintenance means for triggering periodic transmission of said normal state signals to the server through said sending means. (Forecast col 52, ll 37-46: stream server sends the heartbeat (periodic transmission); heartbeat includes: an indication of current position in the stream, the state of the stream (e.g. pause, playing, completed), and a failure type code (alarm) indicating any failure; col 52, ll 52-58: if there has not been a failure to receive stream server heartbeat (periodic transmission); then execution continues)

It would have been obvious to one of ordinary skill in the art to modify Chen for triggering periodic transmission of said state signals as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast for throughput to be used efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, ll 3-7)

Chen-Forecast does not explicitly disclose a special warning message.

However, Sarkar discloses:

e) said receiving means receives a special warning message from said server via said first network when said server has not received said normal state signals in

due time, and said maintenance means triggering a sending of a normal state signal to said server via said second network when said at least one special warning message is received. (Sarkar col 5, ll 49-62: plays a warning notification to endpoints of active media streams after timer expires, endpoint responds, "I'm active" (normal state); call resource resets timer and continues session; col 2, ll 59-62: transmits packets of voice, data, and other information (media), in band communications used for notification messages; col 4, ll 14-18: media streams)

It would have been obvious to one of ordinary skill in the art to modify Chen-Forecast for a special warning message as taught by Sarkar. One of ordinary skill in the art would have been motivated to employ the teachings of Sarkar enhancements of the ability to maintain transcoding after a call manager loses contact with a call resource. (Sarkar col 2, ll 10-13)

**Regarding Claim 2**, Chen discloses data requesting device according to claim 1, wherein said control means to produces also resume control signals, for resuming data streaming from said server after pausing, and said sending means to transmit to said server via said second network said resume control signals. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark; resume normal data flow)

**Regarding Claim 3**, Chen discloses data requesting device according to claim 1,

wherein said data requesting device comprises a user interface (Chen col 1, II 43-48: interactive access; user operates his client machine to request multimedia files from the server; col 4, I 65 - col 5, I 8: user types his commands on client machine; client machine has three interacting processes: client agent which interfaces network interface and multimedia application), enabling a user to trigger said control means and said sending means, so as to cause said control signals to be provided to said server via said second network. (Chen col 5, II 36-40: uses two logical connections; control channel serves to exchange control messages)

**Regarding Claim 4**, Chen discloses data requesting device according to claim 1, wherein said received data being stored in a central memory before being exploited (Chen col 5, II 56-59: output processor delivers data to multimedia application; packet buffer stores data packets until multimedia application requests delivery), said data requesting device comprises regulation means, for triggering said control means (to produce a pause control signal when said data in said central memory exceed a predetermined high threshold level of said central memory. (Chen col 6, II 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, II 47-49: client agent sends NORMAL-TO-PAUSE command if amount increase (exceeds) above high water mark)

**Regarding Claim 5**, Chen discloses data requesting device according to claim 4, wherein said regulation means triggers said control means to produce a resume control signal when said streaming has been paused by said regulation means and said data in

said central memory decrease down to a predetermined low threshold level of said central memory. (Chen col 6, ll 49-51: client agent sends RESUME command decrease from above to below high water mark (threshold level))

**Regarding Claim 6**, Chen discloses data requesting device according to claim 4, wherein at least one of said threshold levels of said central memory depends on a round-trip time between said data requesting device and said server. (Chen col 4, ll 4-17: constant number of frames are played in a second; uses timing information to ensure transmission of a video frame in a frame time; col 4, ll 33-44: times the transmission of multimedia files according to a fixed rate; frame rate during normal transmission; if data in buffer if client agent is below a selected standard watermark, threshold), the transmission rate is increased; if above selected standard it is decreased)

**Regarding Claim 8**, Chen discloses a decoder, comprising a data requesting device according to claim 1. (Chen col 4, l 65 - col 5, l 8: PC (requesting device); user wishes to retrieve multimedia files from a server via data connections over a computer network; col 5, ll 59-67: send a command packet (specific request) for retrieval of requested data; col 5, ll 39-44: control channel serves to exchange control messages; data channel serves to transmit multimedia data from the server to client)

**Regarding Claim 9**, Chen discloses data requesting process through at least one first

communication network from at least one data server, comprising the following steps:

- a) sending requests of determined data to the at least one server via at least one second communication network, (Chen col 5, ll 59-67: send a command packet (specific request) for retrieval of requested data; col 5, ll 39-44: control channel serves to exchange control messages; data channel serves to transmit multimedia data from the server to client; data channel (first) and control channel (second) communications channels (networks))
- b) receiving streamed data from said at least one server via said first communication network, (Chen col 5, ll 48-59: data receiver receives incoming data packets from the network; data receiver signals buffer manager to place data packets into the packet buffer; output processor delivers data to multimedia application; data channel (first) and control channel (second) communications channels (networks)) and
- c) producing and sending to said server via said second network, pause control signals, for pausing data streaming from said server, (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 47-49: client agent sends NORMAL-TO-PAUSE command if amount increase above high water mark)
- d) generating and transmitting to said server via said second network, normal state signals, for said at least one server for normal operation at said data requesting device. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if

amount of data decreases from above the high watermark; resume normal data flow)

Chen does not explicitly disclose generating and periodically transmitting state signals for normal operation.

However, Forecast discloses wherein generating and periodically transmitting state signals, indicating a normal operation. (Forecast col 52, ll 37-46: stream server sends the heartbeat (periodically transmitting); heartbeat includes: an indication of current position in the stream, the state of the stream (e.g. pause, playing (normal operation), completed), and a failure type code indicating any failure; col 52, ll 52-58: if there has not been a failure to receive stream server heartbeat (periodic transmission); then execution continues)

It would have been obvious to one of ordinary skill in the art to modify Chen for generating and periodically transmitting state signals for normal operation as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast in order for throughput to be used efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, ll 3-7)

Chen-Forecast does not explicitly disclose a special warning message. However, Sarkar discloses receiving a special warning message from said at least one server via said first network when said at least one server has not received said normal state signals in due time, and triggering a sending of a normal state signal to

said at least one server via said second network when said at least one special warning message is received. (Sarkar col 5, ll 49-62: plays a warning notification to endpoints of active media streams after timer expires, endpoint responds, "I'm active" (normal state); call resource resets timer and continues session; col 2, ll 59-62: transmits packets of voice, data, and other information (media), in band communications used for notification messages; col 4, ll 14-18: media streams)

It would have been obvious to one of ordinary skill in the art to modify Chen-Forecast for a special warning message as taught by Sarkar. One of ordinary skill in the art would have been motivated to employ the teachings of Sarkar enhancements of the ability to maintain transcoding after a call manager loses contact with a call resource. (Sarkar col 2, ll 10-13)

**Regarding Claim 10**, Chen discloses data transmitting device via at least one first communication network comprising:

- a) receiving means for receiving requests of determined data from at least one data requesting device via at least one second communication network, (Chen col 5, ll 59-67: send a command packet (specific request) for retrieval of requested data; col 5, ll 39-44: control channel serves to exchange control messages; data channel serves to transmit multimedia data from the server to client; data channel (first) and control channel (second) communications channels (networks)) and
- b) streaming means for triggering streaming of said data to said data requesting

device via said first network, (Chen col 5, ll 48-59: data receiver receives incoming data packets from the network; data receiver signals buffer manager to place data packets into the packet buffer; output processor delivers data to multimedia application; data channel (first) and control channel (second) communications channels (networks))

- c) said receiving means receiving from said data requesting device pause control messages, said streaming means pausing said data streaming when said pause control messages are received, (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 47-49: client agent sends NORMAL-TO-PAUSE command if amount increase above high water mark) and
- d) said receiving means receives periodically normal state signals from said data requesting device (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark; resume normal data flow), and
- e) said data requesting device comprises means intended to trigger said normal state signals, said data transmitting device being provided for a data requesting device according to any of claim 1. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high watermark; resume normal data flow)

Chen does not explicitly disclose triggering an alarm state when said state signals

are not received in due time.

However, Forecast discloses wherein alarm means intended to trigger an alarm state when said state signals are not received in due time. (Forecast col 52, ll 37-46: controller to receive a heartbeat from each stream server within a certain time period (must be received in due time); stream server sends the heartbeat (periodic transmission); heartbeat includes: an indication of current position in the stream, the state of the stream (e.g. pause, playing, completed), and a failure type code (alarm) indicating any failure; col 52, ll 52-58: if there has not been a failure; then execution continues; if there has been a failure then log the error and initiate stream server recovery (alarm state))

It would have been obvious to one of ordinary skill in the art to modify Chen for triggering an alarm state when said state signals are not received in due time as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast in order for throughput to be used efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, ll 3-7)

Chen-Forecast does not explicitly disclose a special warning message. However, Sarkar discloses said alarm means producing a warning message when said normal state signals are not received in due time; transfer means for sending said warning message to said at least one data requesting device via said first network, said receiving means receiving a normal state signal from said at least one data requesting device when said warning message is received by said at least one

data requesting device. (Sarkar col 5, ll 49-62: plays a warning notification to endpoints of active media streams after timer expires, endpoint responds, “I’m active” (normal state); call resource resets timer and continues session; col 2, ll 59-62: transmits packets of voice, data, and other information (media), in band communications used for notification messages; col 4, ll 14-18: media streams)

It would have been obvious to one of ordinary skill in the art to modify Chen-Forecast for a special warning message as taught by Sarkar. One of ordinary skill in the art would have been motivated to employ the teachings of Sarkar enhancements of the ability to maintain transcoding after a call manager loses contact with a call resource. (Sarkar col 2, ll 10-13)

**Regarding Claim 11**, Chen discloses data transmitting device according to claim 10, wherein said normal state signal is received and depending on a round-trip time between said data requesting device and said data transmitting device. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high watermark; resume normal data flow; col 4, ll 33-44: times the transmission of multimedia files according to a fixed rate; frame rate during normal transmission;)

Chen does not explicitly disclose an alarm means to trigger said alarm state when any of said state signals is not received after a duration following an expected periodic time for receiving said state signal and said duration. However, Forecast discloses wherein alarm means are intended to trigger said alarm state when any of said state signal is not

received after a safety duration following an expected periodic time for receiving said state signal and said safety duration. (Forecast col 52, II 40-46: stream server sends the heartbeat (periodic transmission); heartbeat includes: the state of the stream (e.g. pause, playing, completed), and a failure type code; col 52, II 52-56: initiate stream server recovery; col 53, I 65 - col 54, I 20: client may specify a parameter which defines how to perform failover; (FAILOVER\_SIGNALCLIENT: client will be signaled (warning message)) to request if failover should occur; col 55, I 64 - col 56, I 8: controller send a message (warning message) to client; master controller checks whether or not a time limit has been exceeded for a response from the client; if not alarm state; safety duration is defined for this Office Action as time period waiting for response from client after message sent to client)

It would have been obvious to one of ordinary skill in the art to modify Chen for said alarm state when any of said state signals is not received after a safety duration following an expected periodic time for receiving said state signal and said safety duration as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast in order for throughput to be used efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, II 3-7)

**Regarding Claim 12**, Chen discloses data transmitting device according to claim 10, wherein said normal state signals received and data transmitting device comprises transfer means intended to send said messages to said data requesting device via said

first network. (Chen col 6, II 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, II 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark; resume normal data flow)

Chen does not explicitly disclose alarm means to produce a warning message when any of said state signals is not received in due time.

However, Forecast disclose wherein said alarm means triggers said alarm state. (Forecast col 52, II 40-46: stream server sends the heartbeat (periodic transmission); heartbeat includes: the state of the stream (e.g. pause, playing, completed), and a failure type code; col 52, II 52-56: initiate stream server recovery; col 53, I 65 - col 54, I 20: client may specify a parameter which defines how to perform failover; (FAILOVER\_SIGNALCLIENT: client will be signaled (warning message)) to request if failover should occur; col 55, I 64 - col 56, I 8: controller send a message (warning message) to client; master controller checks whether or not a time limit has been exceeded for a response from the client; if not alarm state)

It would have been obvious to one of ordinary skill in the art to modify Chen-Forecast for alarm means to produce a warning message when any of said state signals is not received in due time as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast in order for throughput to be used efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, II 3-7)

Chen-Forecast does not explicitly disclose a duration has elapsed after the sending of said warning message.

However, Sarkar discloses an alarm state only when a complementary duration has elapsed after the sending of said warning message. (Sarkar col 8, ll 35-41: user response within a given time interval, continue session)

It would have been obvious to one of ordinary skill in the art to modify Chen-Forecast that a duration has elapsed after the sending of said warning message as taught by Sarkar. One of ordinary skill in the art would have been motivated to employ the teachings of Sarkar enhancements of the ability to maintain transcoding after a call manager loses contact with a call resource. (Sarkar col 2, ll 10-13)

**Regarding Claim 13**, Chen discloses data transmitting device according to claim 9, wherein said receiving means receives resume control messages from said data requesting device, and said streaming means resumes said data streaming when said streaming has been paused and one of said resume control messages is received. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark; resume normal data flow)

**Regarding Claim 14**, Chen discloses data transmitting process via at least one first communication network comprising the following steps:

- a) receiving requests of determined data from at least one data requesting device via at least one second communication network, (Chen col 5, ll 59-67: send a command packet (specific request) for retrieval of requested data; col 5, ll 39-44:

control channel serves to exchange control messages; data channel serves to transmit multimedia data from the server to client; data channel (first) and control channel (second) communications channels (networks))

- b) streaming said data to said data requesting device via said first network, (Chen col 5, II 48-59: data receiver receives incoming data packets from the network; data receiver signals buffer manager to place data packets into the packet buffer; output processor delivers data to multimedia application; data channel (first) and control channel (second) communications channels (networks)) and
- c) receiving from said data requesting device pause control messages, and pausing said data streaming when said pause control messages are received, (Chen col 6, II 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, II 47-49: client agent sends NORMAL-TO-PAUSE command if amount increase above high water mark)
- d) receiving periodically normal state signals from said data requesting device, (Chen col 6, II 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, II 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark; resume normal data flow) and
- e) triggering said normal state signals, said data transmitting process being executed by a data transmitting device compliant with claim 10. (Chen col 6, II 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, II 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark)

Chen does not explicitly disclose triggering an alarm state when said state signal is not received in due time.

However, Forecast discloses wherein triggering an alarm state when said state signal is not received in due time. (Forecast col 52, II 37-46: execution branches to step 534 if controller fails to receive a heartbeat from each stream servers within a certain timeout period (state signal or heartbeat not received in due time); stream server sends the heartbeat (periodic transmission); heartbeat includes: the state of the stream (e.g. pause, playing, completed), and a failure type code indicating any failure; col 52, II 52-59: branches to step 534: log the error and initiate stream server recovery state (alarm state))

It would have been obvious to one of ordinary skill in the art to modify Chen for triggering an alarm state when said state signal is not received in due time as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast in order for throughput to be used efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, II 3-7)

Chen-Forecast does not explicitly disclose a special warning message. However, Sarkar discloses sending a special warning message via said first network to said at least one data requesting device when said normal state signals are not received in due time, - and receiving of a normal state signal via said second network when said at least one special warning message is received by said at least

one data requesting device. (Sarkar col 5, ll 49-62: plays a warning notification to endpoints of active media streams after timer expires, endpoint responds, "I'm active" (normal state); call resource resets timer and continues session; col 2, ll 59-62: transmits packets of voice, data, and other information (media), in band communications used for notification messages; col 4, ll 14-18: media streams)

It would have been obvious to one of ordinary skill in the art to modify Chen-Forecast for a special warning message as taught by Sarkar. One of ordinary skill in the art would have been motivated to employ the teachings of Sarkar enhancements of the ability to maintain transcoding after a call manager loses contact with a call resource. (Sarkar col 2, ll 10-13)

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KYUNG Hye SHIN whose telephone number is (571)272-3920. The examiner can normally be reached on 9:30 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia L. Dollinger can be reached on (571) 272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

6/6/2010

/Kyung Hye Shin/  
Primary Examiner, Art Unit 2443